

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Leman, et al.	)	Group Art Unit 2635
			)	
Appl. No.	:	09/574,736	)	
			)	
Filed	:	May 18, 2000	)	
			)	
For	:	REMOTE COMPUTER	)	
		CONTROLLER AND	)	
		CONTROL METHOD	)	
			)	
Examiner	:	Vernal U. Brown	)	
			)	

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DECLARATION UNDER 37 C.F.R. § 1.131

1. This declaration is directed to establishing the date of the invention in the above-referenced U.S. Patent Application No. 09/574,736.

2. This declaration is supplemental and in addition to the *Declaration Under 37 C.F.R. §1.131* dated February 17, 2005 that was previously submitted by me.

3. From at least March 13, 2000 up until May 18, 2000, I had been actively working as a full-time patent attorney with multiple pending and yet-to-be-filed patent applications, including the above-referenced subject invention.

a. On January 24, 2000, I prepared a draft specification directed to the above case and provided this draft to counsel for Micron Electronics, the assignee of the subject invention, for review by the inventors. The January 24, 2000 specification described the presently claimed invention. Appendix C is a copy of this draft specification.

b. On February 29, 2000, the assignee provided requested changes to the draft of the application to me.

c. From the period of February 29, 2000 through April 11, 2000 I actively and expeditiously worked full-time on my general patent docket. At that time, my docket included multiple pending and yet-to-be-filed unrelated patent applications.

d. On April 11, 2000, I made changes to the subject application. Between April 11, 2000 and May 18, 2000 the final patent application documents were being routed between my office and the inventors for final review and signatures.

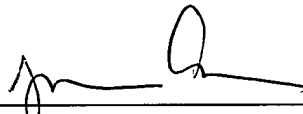
Appl. No. : 09/574,736  
Filed : May 18, 2000

f. On May 18, 2000 I filed the above-referenced application.

Penalty of Perjury Statement

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent resulting therefrom.

Dated: 6/7/05

By:   
Thomas Arno, Esq.

1716872  
051805

**REMOTE COMPUTER CONTROLLER AND CONTROL METHOD**BackgroundField of the Invention

5           The invention relates to remote control of computers.

Description of the Related Art

10           In today's business world, personal computers are almost a necessity, and are commonly found in offices and employee workspaces. Generally, people turn their computer off when they leave the office after work in the evening. This is done to conserve energy, to address safety concerns common to all energized electrical appliances, and also in response to security concerns that someone other than the computer owner may gain access to sensitive business information. Thus, when most people arrive at the office in the morning, they must turn on their computer, wait for the system to boot up, and then launch some particular application program they will be using. This results in wasted time as the user sits and waits for the computer to complete the boot up process.

15           Currently, no computer system is available that addresses this problem. Various types of remote control systems for computers have been described and marketed, but none are particularly suitable for resolving the above described problem. Many conventional remote computer controllers, wireless mice and keyboards, for example, have a very short communication range, and/or require a clear line of sight between the wireless transmitter in the device and the receiver in the computer. This makes them impractical for use by a worker until entering the office. There would therefore be minimal, if any, time savings involved with the use of these devices to control initiation of computer operation.

20           Other remote control devices work over telephone connections. One example of such a system is provided by U.S. Patent No. 5,596,628 to Jon Klein. These systems, however, require the initiation of a telephone connection with the computer to be controlled. This is not convenient for solving the above described problem. For these reasons, a convenient and simple to operate computer system with remote computer power control is needed in the art.

30

### Summary

The invention includes remotely controllable computer systems, methods of remote computer control, and devices for the remote control of computers. In one embodiment, the invention comprises a remote controlled computer system, including a computer comprising a wireless receiver and a hand-held controller comprising a wireless transmitter. The hand-held controller is configured to send a signal to the wireless receiver upon user actuation, and the computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving the signal.

10 In another embodiment the invention comprises a method of remotely controlling a computer comprising transmitting a signal from a hand-held controller to the computer, and in response thereto, placing the computer in an on state and launching a user specified application program.

15 One embodiment of a remote control device for a personal computer comprises a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer. The housing comprises an attachment device for connecting the remote control device to a key ring, purse handle, or other commonly carried personal item. In another embodiment, a remote control device for a personal computer comprises a hand-held housing containing  
20 wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer and at least one user actuated control operative to initiate wireless signal transmission of a command to perform a power up sequence and launch a selected application program.

### Brief Description of the Drawings

25 FIG. 1 is an overall perspective view of a hand-held computer controller in wireless communication with a personal computer according to one embodiment of the invention.

FIG. 2 is flow chart illustrating steps performed by a computer in response to received control signals according to one embodiment of the invention.

30 FIG. 3 is a block diagram of a computer system configured to receive and interpret control signals according to one embodiment of the invention.

### Detailed Description of the Invention

Embodiments of the invention will now be described with reference to the accompanying Figures, wherein like numerals refer to like elements throughout. The terminology used in the description presented herein is not intended to be interpreted in any limited or restrictive manner, simply because it is being utilized in conjunction with a detailed description of certain specific embodiments of the invention. Furthermore, embodiments of the invention may include several novel features, no single one of which is solely responsible for its desirable attributes or which is essential to practicing the inventions herein described.

Referring now to Figure 1, a computer system in accordance with one embodiment of the invention comprises a controller 20. The controller 20 is advantageously small enough to fit comfortably in a person's hand as well as in a pocket, purse, automobile glove compartment, or the like. In one embodiment, the controller 20 comprises an attachment device 22. The attachment device 22 may be a suitably sized hole, a wire loop or ring, or other facility for attaching the controller 20 to a key ring, purse handle, or other commonly carried personal item.

The controller 20 also incorporates internal wireless transmission circuitry and an antenna (not shown) for wireless communication with a computer 24 that incorporates an antenna 26 and a wireless receiver. These aspects of the computer 24 will be described in more detail below with reference to Figure 3. Using a wireless link 28, the controller 20 sends commands to the computer 24. In one embodiment, the commands issued by the controller 20 are operative to place the computer in the on state and optionally to also launch a user specified application program such as a word processor, spreadsheet, web browser, etc.

As shown in Figure 1, one embodiment of the controller 20 has three user actuated push buttons. A first button 30 may initiate only computer 24 power up, but not launch any specific application programs. A second button 32 may initiate both power up and the launch of a first user defined application program. A third button 34 may initiate both power up and the launch of a second user defined application program. Thus, the user may have a choice of several different remote control operations. This embodiment may be used to eliminate time wasted by computer users while waiting for their computer to

boot up and load a desired application program. In a business or office environment, for example, a computer user may prefer to have their office computer on and running the moment they arrive at the office. In this embodiment, an advantageous range for the communication link 28 is between approximately 200 and 500 feet. With this range, as the user is heading toward the office, they can press a button 30, 32, 34 on the controller 20, thereby initiating either only power up, or also power up plus the launch of a desired application. When they arrive at the office door a few minutes later, the computer is ready and waiting for them.

The construction of wireless transmitter and receiver circuitry suitable for implementing the wireless link 28 is well known and will not be described in detail herein. This technology is used in applications such as garage door openers, keyless entry systems for automobiles, as well as other currently available commercial applications, and a wide variety of specific designs could be used in the controller 20 and computer 24 without altering the character of the system. The 200 to 500 foot range is advantageous in that it is far enough to generally provide two or more minutes between initiation of power up and arrival of the user at the computer 24, but it is not so far to become an excessive drain on one or more batteries internal to the controller 20.

One embodiment of a method of response of the computer 24 to the actuation of the buttons 30, 32, 34 on the controller 20 is illustrated in Figure 2. The method begins at step 40 when the computer 24 receives a wireless transmission signal from the controller 20. As also shown below in Figure 3, the wireless message reception and analysis circuitry in the computer 24 is continually in the on-state, even when the remainder of the computer 24 is in an off-state. The signal received by the computer 24 advantageously includes at least two pieces of information for use by the computer 24. The first is a controller hardware identification code. The second is an instruction code that designates which application program, if any, should be launched.

At the next step 42, the computer 24 checks the controller hardware identification code, and compares it to an internally stored identification code. If, at step 44, these two codes match, the computer 24 accepts the remainder of the transmitted data and, at step 46, stores the transmitted instruction code. If the codes do not match, at step 48 the computer 24 ignores the remainder of the message. In analogy with garage door openers

and automotive keyless entry systems, this step 42 allows simultaneous use of different controllers 20 in proximity to one another in a single office building for example. In this way, the computer 24 only responds to control instructions from the controller 20 in the possession of the operator of the computer 24.

5           After storing the instruction code, at step 50 the computer initiates a power up sequence. As described below with reference to Figure 3, this step advantageously includes activating the computer power supply and loading the operating system software. At step 52, the computer 24 retrieves and interprets the stored instruction code, and at step 54, the computer launches the appropriate application program as specified by the  
10           retrieved instruction code.

Referring now to Figure 3, the computer 24 advantageously includes a processor and memory circuitry 60 and a storage device 62 that may, for example, comprise a hard disk drive. The computer 24 also includes remote control interface circuitry 64 for receiving signals and/or data from the remote transmitter 20. The computer 24 further  
15           includes a power supply 66 that supplies power to all of the electrical components of the computer 24. The processor and memory circuits 60, the storage device 62, and the remote control interface circuitry 64 are coupled through a bus system 70. Although not illustrated for purposes of clarity, those of skill in the art will appreciate that the bus system 70 will typically comprise a set of busses of varying format that communicate  
20           through bridge circuitry. The remote control interface circuitry 64 may be incorporated into the computer 24 in a variety of ways. It may comprise a daughter printed circuit board which plugs into an expansion slot in the computer 24. Alternatively, it may be incorporated directly onto a motherboard in the computer 24 that also mounts the processor and memory circuits 60. The remote control interface circuitry 64 is continually  
25           powered by a battery 72 so that it can receive and process wireless signals transmitted to the computer 24 even when the computer 24 is in an off state.

The storage device 62 stores, among other things, several application programs 74a, 74b, 74c. As discussed above, it is one of these programs that the user may wish to remotely launch. The storage device 62 also contains a remote on program 76. In this  
30           embodiment, the remote controller 20 sends a signal to the remote control interface circuitry 64 which includes the controller identification code 78 and one of the instruction

codes 80 or 82. The remote control interface circuitry 64 then compares the received identification code with a stored identification code 84. If the two match, the remote control interface circuitry 64 stores the received instruction code in an instruction code register 86.

5           After storing the instruction code in the register 86, the remote control interface circuitry activates the power supply 66 by asserting an output 88 which is connected to the power supply circuitry 66. This may be accomplished in a wide variety of ways which are well understood by those in the art. Asserting the output line 88 may close a relay in the AC power lines to the power supply, for example. In an advantageous embodiment, the  
10           power supply includes a low voltage secondary on/off signal line that toggles the supply from an off state to an on state when asserted. In this embodiment, the output 88 is coupled to this secondary on/off signal line.

          Upon the application of power, the computer 24 will load its operating system software. A variety of operating systems are currently utilized in the computer industry,  
15           including Unix(TM), Linux(TM), DOS(TM), and Windows(TM). At this time, a large majority of the currently commercially available personal computers automatically load Windows(TM) upon power up. Furthermore, Windows(TM) includes a Startup utility, which allows the user to list one or more application programs that Windows(TM) will load and run automatically when the computer 24 is powered up.

20           In the embodiment of Figure 3, the remote on program 76 is listed in the Startup utility for automatic launch when the computer is powered up. The remote on program 76 causes the computer to perform an I/O operation to retrieve the instruction code stored in the instruction code register 86. Using a table which is part of the remote on program 76 that cross references instruction codes with application programs 74a, 74b, 74c, the remote  
25           on program 76 determines which application program the user wishes to have launched, and initiates the loading of this user selected application program.

          With the controller 20 illustrated in Figure 1, depending on the button 30, 32, 34 pushed on the remote controller 20, different instruction codes will be sent and stored in the instruction code register 86, resulting in the launch of different application programs.  
30           If the user only wants to power the computer up without launching a program, this may be accomplished by sending, for example, all 0s as an instruction code when the appropriate



button 30 is pushed on the controller 20. This may be interpreted by the remote on program 76 as an instruction to load no additional application program. In addition, the remote control interface circuitry could be provided with a connection 90 to the power supply output. In an embodiment with this connection 90, if the power supply is activated locally with the power switch, the power supply output may be sensed, and the remote control interface circuit could be configured load 0s into the instruction code register in response so that no application program is automatically loaded as may be the case with the remote power up procedure. A convenient remote controller is therefore provided which is easy to carry, simple to operate, and which saves computer users time.

10           The foregoing description details certain embodiments of the invention. It will be appreciated, however, that no matter how detailed the foregoing appears in text, the invention can be practiced in many ways. As is also stated above, it should be noted that the use of particular terminology when describing certain features or aspects of the invention should not be taken to imply that the terminology is being re-defined herein to  
15           be restricted to including any specific characteristics of the features or aspects of the invention with which that terminology is associated. The scope of the invention should therefore be construed in accordance with the appended claims and any equivalents thereof.

WHAT IS CLAIMED IS:

1. A remote controlled computer system, comprising:  
a computer comprising a wireless receiver;  
a hand-held controller comprising a wireless transmitter;  
5 wherein said hand-held controller is configured to send a signal to said wireless receiver upon user actuation, and wherein said computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving said signal.
2. The computer system of Claim 1, wherein the wireless receiver and the  
10 wireless transmitter are configured for radio frequency communication.
3. The computer system of Claim 2, wherein said wireless receiver and wireless transmitter have a communication range of approximately 200 to 500 feet.
4. The computer system of Claim 1, wherein said hand-held controller  
15 comprises at least two buttons, and wherein said hand-held controller is configured to send a first signal to said wireless receiver in response to user actuation of a first button and a second signal in response to user actuation of a second button, and wherein said computer is configured to launch a first application program in response to said first signal and a second application program in response to said second signal.
5. A method of remotely controlling a computer comprising transmitting a  
20 signal from a hand-held controller to said computer, and in response thereto, placing said computer in an on state and launching a user specified application program.
6. The method of Claim 5 comprising the step of analyzing said signal to select an application for launch from a plurality of application programs.
7. The method of Claim 5, wherein said transmitting occurs over a distance  
25 of approximately 200 to 500 feet.
8. A computer system, comprising:  
a hand-held controller comprising a radio frequency transmitter, wherein  
said controller is configured to transmit at least first and second different signals  
in response to at least first and second different user actuation operations;  
30 a computer comprising a radio frequency receiver; wherein said computer is configured to (1) receive said first and second different signals, (2)

analyze said first and second different signals, (3) perform a power up sequence in response to either said first signal or said second signal, (4) launch a first application program in response to said first signal, and (5) launch a second application program in response to said second signal.

5           9.     The computer system of Claim 8, wherein said first and second different user actuation operations comprise depressing first and second buttons on said hand-held controller.

          10.    A method of computer control comprising:  
                  sending a first signal approximately 200-500 feet from a controller to a  
10           computer;  
                  in response thereto, placing said computer in an on state and launching a first application program;  
                  using said application program;  
                  powering down said computer;  
15           sending a second different signal approximately 200-500 feet from said controller to said computer; and  
                  in response thereto, placing said computer in an on state and launching a second application program.

          11.    A remote control device for a personal computer comprising a hand-held  
20           housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer, wherein said housing comprises an attachment device for connecting said remote control device to a key ring, purse handle, or other commonly carried personal item.

          12.    The remote control device of Claim 11, additionally comprising a  
25           plurality of user actuated buttons for selecting from a plurality of remotely controlled personal computer functions.

          13.    The remote control device of Claim 11, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

30           14.    A remote control device for a personal computer comprising:

a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer; and

5 at least one user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a selected application program.

10 15. The remote control device of Claim 14, additionally comprising a second user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a different selected application program.

16. The remote control device of Claim 14, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

15 17. A computer system comprising:  
a computer comprising a power supply and a storage device storing application programs; and

20 hand-held remote control means for activating said power supply and launching a selected one of said application programs from a distance of approximately 200 to 500 feet.

18. A computer system comprising:  
means for sending first and second different signals from a controller to a computer;

25 means for placing said computer in an on state and launching a first application program in response to said first signal; and

means for placing said computer in an on state and launching a second application program in response to said second signal.

30 19. A computer system comprising:  
a computer;  
a power source connectable to the computer so as to power operation of the computer;

at least one application program configured to operate in the computer;  
and

5 a hand-held remote transmitter configured to send at least one signal causing both power to be applied from the power source to the computer so as to power up the computer and also causing the at least one application program to be launched on the computer.

## REMOTE COMPUTER CONTROLLER AND CONTROL METHOD

### Abstract of the Disclosure

5 A computer system is configured to be powered up by a hand-held controller. The hand-held controller is in wireless communication with a computer. One or more buttons on the hand-held controller may be used to automatically launch a particular application program which has been pre-selected by a computer user after completing the power up process.

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		CONTROLLER AND	)	
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			)	
Examiner	:	Vernal U. Brown	)	
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DECLARATION UNDER 37 C.F.R. § 1.131

1. This declaration is to establish invention priority of the above-referenced U.S. Patent Application No. 09/574,736.

2. I, Michael V. Leman, am one of the joint inventors of the claims in the above-referenced application, along with William M. Creese, the other joint inventor. At the time we invented the subject matter of the above-referenced application, I was an employee of Micron Electronics, Inc., assignee of the subject invention.

3. I have reviewed the Office Action from the Examiner at the Patent and Trademark Office dated March 28, 2005 rejecting the claims of the above-referenced application under 35 U.S.C. § 103.

4. We, the joint inventors, had conceived of the invention as early as March 13, 2000 in this country, as described and claimed in our application, as evidenced by the following events:

a. On January 24, 2000, Tom Arno, an attorney at the law firm Knobbe Martens Olson and Bear, provided to counsel for assignee a draft application directed to the above-referenced invention for review by us. Appendix C is a copy of the draft application I had reviewed.

b. On February 23, 2000, William Creese provided to Nancey Hammond, a legal assistant of Micron Electronics, certain requested changes to the draft application, and I was carbon copied on the e-mail sent. Appendix A is a copy of the requested changes.

c. To my knowledge, these changes were communicated to Tom Arno by the assignee on February 29, 2000.

Appl. No. : 09/574,736  
Filed : May 18, 2000

d. To my knowledge, on April 12, 2000, Tom Arno sent back a revised draft of the application incorporating some of the requested changes to the assignee for review. Appendix B is a copy of this revised application.

e. I approved of the revised application, and to my knowledge, the application was filed by Tom Arno on May 18, 2000.

Penalty of Perjury Statement

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent resulting therefrom.

Dated: 5/23/2005

By: Michael V. Leman  
Michael V. Leman

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**Nancey Hammond**

From: William M Cresse [billyc@micron.net]  
 Sent: Wednesday, February 23, 2000 5:18 PM  
 To: njhammond@micronpc.com  
 Cc: parevis@micronpc.com; mvleman@micronpc.com  
 Subject: 98.03559 (MPATENT.158A) - REMOTE COMPUTER CONTROLLER AND CONTROL METHOD

*1st draft  
w/ changes*

Nancey:

I apologize for not responding more quickly, but things have been very busy and hectic around here lately..... Anyway, I have reviewed 98.03559 (MPATENT.158A) - REMOTE COMPUTER CONTROLLER AND CONTROL METHOD. It looks good and I won't request any revisions, but I do have a few comments..... You, Michael and Paul should decide if the following comments merit inclusion into the draft application, revision of the draft application or otherwise:

- OLD 1. Page 1 (Line 17) - This remote computer controller could apply to on-board computer systems in automobiles. We could remotely trigger an engine block warmer in Alaska or start your car's engine as you approach to save a few more valuable seconds.
- ✓ 2. Page 3 (Line 24) - These include CADD and CAE softwares, which have lengthy boot times, such as ProEngineer.
- ✓ 3. Page 4 (Line 4) - In my opinion, a preferred maximum range for the user would be 300 yards (900 feet). But, if battery life suffers, 500 feet is just fine.
- OK - just rays wireless 4. Page 8 (Line 10) - Is it limited to Radio Frequency waves? Could it use microwaves, sound pressure waves or infrared frequencies for certain design environments and/or different embodiments of the invention?
- beyond this invention 5. Page 9 (Line 14) - Another application and/or use for this invention would be to power down a computer remotely (or remote locking via a mechanical solenoid). Perhaps you have walked all the way to your car in that great big MicronPC parking lot and you don't remember if you shut down your workstation. No worries, just press the off button on the remote computer controller.....
6. Page 10 (Line 20) - Perhaps this could be tied into the employee identification badges. Your cubicle mate will know you are about to arrive because your computer will start it's boot sequence when your ID badge triggers it as you enter company property.....

Well, that's all I have. I hope these comments help in some way..... Thanks. Bill.

*See changes pp. 1, 3, 4, 6 & 7*

## Appendix A

**REMOTE COMPUTER CONTROLLER AND CONTROL METHOD**BackgroundField of the Invention

5           The invention relates to remote control of computers.

Description of the Related Art

10           In today's business world, personal computers are almost a necessity, and are commonly found in offices and employee workspaces. Generally, people turn their computer off when they leave the office after work in the evening. This is done to conserve energy, to address safety concerns common to all energized electrical appliances, and also in response to security concerns that someone other than the computer owner may gain access to sensitive business information. Thus, when most people arrive at the office in the morning, they must turn on their computer, wait for the system to boot up, and then launch some particular application program they will be using. This results in wasted time as the user sits and waits for the computer to complete the boot up process.

15           Currently, no computer system is available that addresses this problem. Various types of remote control systems for computers have been described and marketed, but none are particularly suitable for resolving the above described problem. Many conventional remote computer controllers, wireless mice and keyboards, for example, have a very short communication range, and/or require a clear line of sight between the wireless transmitter in the device and the receiver in the computer. This makes them impractical for use by a worker until entering the office. There would therefore be minimal, if any, time savings involved with the use of these devices to control initiation of computer operation.

20           Other remote control devices work over telephone connections. One example of such a system is provided by U.S. Patent No. 5,596,628 to Jon Klein. These systems, however, require the initiation of a telephone connection with the computer to be controlled. This is not convenient for solving the above described problem. For these reasons, a convenient and simple to operate computer system with remote computer power control is needed in the art.

### Summary

The invention includes remotely controllable computer systems, methods of remote computer control, and devices for the remote control of computers. In one embodiment, the invention comprises a remote controlled computer system, including a computer comprising a wireless receiver and a hand-held controller comprising a wireless transmitter. The hand-held controller is configured to send a signal to the wireless receiver upon user actuation, and the computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving the signal.

In another embodiment the invention comprises a method of remotely controlling a computer comprising ~~transmitting a signal~~ from a hand-held controller to the computer, and in response thereto, placing the computer in an on state and launching a user specified application program.

One embodiment of a remote control device for a personal computer comprises a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer. The housing comprises an attachment device for connecting the remote control device to a key ring, purse handle, or other commonly carried personal item. In another embodiment, a remote control device for a personal computer comprises a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer and at least one user actuated control operative to initiate wireless signal transmission of a command to perform a power up sequence and launch a selected application program.

### Brief Description of the Drawings

FIG. 1 is an overall perspective view of a hand-held computer controller in wireless communication with a personal computer according to one embodiment of the invention.

FIG. 2 is flow chart illustrating steps performed by a computer in response to received control signals according to one embodiment of the invention.

FIG. 3 is a block diagram of a computer system configured to receive and interpret control signals according to one embodiment of the invention.

### Detailed Description of the Invention

Embodiments of the invention will now be described with reference to the accompanying Figures, wherein like numerals refer to like elements throughout. The terminology used in the description presented herein is not intended to be interpreted in any limited or restrictive manner, simply because it is being utilized in conjunction with a detailed description of certain specific embodiments of the invention. Furthermore, embodiments of the invention may include several novel features, no single one of which is solely responsible for its desirable attributes or which is essential to practicing the inventions herein described.

Referring now to Figure 1, a computer system in accordance with one embodiment of the invention comprises a controller 20. The controller 20 is advantageously small enough to fit comfortably in a person's hand as well as in a pocket, purse, automobile glove compartment, or the like. In one embodiment, the controller 20 comprises an attachment device 22. The attachment device 22 may be a suitably sized hole, a wire loop or ring, or other facility for attaching the controller 20 to a key ring, purse handle, or other commonly carried personal item.

The controller 20 also incorporates internal wireless transmission circuitry and an antenna (not shown) for wireless communication with a computer 24 that incorporates an antenna 26 and a wireless receiver. These aspects of the computer 24 will be described in more detail below with reference to Figure 3. Using a wireless link 28, the controller 20 sends commands to the computer 24. In one embodiment, the commands issued by the controller 20 are operative to place the computer in the on state and optionally to also launch a user specified application program such as a word processor, spreadsheet, web browser, CAD and CAE programs, etc.

As shown in Figure 1, one embodiment of the controller 20 has three user actuated push buttons. A first button 30 may initiate only computer 24 power up, but not launch any specific application programs. A second button 32 may initiate both power up and the launch of a first user defined application program. A third button 34 may initiate both power up and the launch of a second user defined application program. Thus, the user may have a choice of several different remote control operations. This embodiment may be used to eliminate time wasted by computer users while waiting for their computer to

boot up and load a desired application program. In a business or office environment, for example, a computer user may prefer to have their office computer on and running the moment they arrive at the office. In this embodiment, an advantageous range for the communication link 28 may be between approximately 200 and 500 feet. With this range, as the user is heading toward the office, they can press a button 30, 32, 34 on the controller 20, thereby initiating either only power up, or also power up plus the launch of a desired application. When they arrive at the office door a few minutes later, the computer is ready and waiting for them.

The construction of wireless transmitter and receiver circuitry suitable for implementing the wireless link 28 is well known and will not be described in detail herein. This technology is used in applications such as garage door openers, keyless entry systems for automobiles, as well as other currently available commercial applications, and a wide variety of specific designs could be used in the controller 20 and computer 24 without altering the character of the system. The 200 to 500 foot range may be advantageous in that it is far enough to generally provide two or more minutes between initiation of power up and arrival of the user at the computer 24, but it is not so far to become an excessive drain on one or more batteries internal to the controller 20. Longer ranges of 900 or more feet may also be advantageous, especially in those instances where the resulting reduction of battery life is not a major concern.

One embodiment of a method of response of the computer 24 to the actuation of the buttons 30, 32, 34 on the controller 20 is illustrated in Figure 2. The method begins at step 40 when the computer 24 receives a wireless transmission signal from the controller 20. As also shown below in Figure 3, the wireless message reception and analysis circuitry in the computer 24 is continually in the on-state, even when the remainder of the computer 24 is in an off-state. The signal received by the computer 24 advantageously includes at least two pieces of information for use by the computer 24. The first is a controller hardware identification code. The second is an instruction code that designates which application program, if any, should be launched.

At the next step 42, the computer 24 checks the controller hardware identification code, and compares it to an internally stored identification code. If, at step 44, these two codes match, the computer 24 accepts the remainder of the transmitted data and, at step

46, stores the transmitted instruction code. If the codes do not match, at step 48 the computer 24 ignores the remainder of the message. In analogy with garage door openers and automotive keyless entry systems, this step 42 allows simultaneous use of different controllers 20 in proximity to one another in a single office building for example. In this way, the computer 24 only responds to control instructions from the controller 20 in the possession of the operator of the computer 24.

After storing the instruction code, at step 50 the computer initiates a power up sequence. As described below with reference to Figure 3, this step advantageously includes activating the computer power supply and loading the operating system software. At step 52, the computer 24 retrieves and interprets the stored instruction code, and at step 54, the computer launches the appropriate application program as specified by the retrieved instruction code.

Referring now to Figure 3, the computer 24 advantageously includes a processor and memory circuitry 60 and a storage device 62 that may, for example, comprise a hard disk drive. The computer 24 also includes remote control interface circuitry 64 for receiving signals and/or data from the remote transmitter 20. The computer 24 further includes a power supply 66 that supplies power to all of the electrical components of the computer 24. The processor and memory circuits 60, the storage device 62, and the remote control interface circuitry 64 are coupled through a bus system 70. Although not illustrated for purposes of clarity, those of skill in the art will appreciate that the bus system 70 will typically comprise a set of busses of varying format that communicate through bridge circuitry. The remote control interface circuitry 64 may be incorporated into the computer 24 in a variety of ways. It may comprise a daughter printed circuit board which plugs into an expansion slot in the computer 24. Alternatively, it may be incorporated directly onto a motherboard in the computer 24 that also mounts the processor and memory circuits 60. The remote control interface circuitry 64 is continually powered by a battery 72 so that it can receive and process wireless signals transmitted to the computer 24 even when the computer 24 is in an off state.

The storage device 62 stores, among other things, several application programs 74a, 74b, 74c. As discussed above, it is one of these programs that the user may wish to remotely launch. The storage device 62 also contains a remote on program 76. In this

embodiment, the remote controller 20 sends a signal to the remote control interface circuitry 64 which includes the controller identification code 78 and one of the instruction codes 80 or 82. The remote control interface circuitry 64 then compares the received identification code with a stored identification code 84. If the two match, the remote control interface circuitry 64 stores the received instruction code in an instruction code register 86.

After storing the instruction code in the register 86, the remote control interface circuitry activates the power supply 66 by asserting an output 88 which is connected to the power supply circuitry 66. This may be accomplished in a wide variety of ways which are well understood by those in the art. Asserting the output line 88 may close a relay in the AC power lines to the power supply, for example. In an advantageous embodiment, the power supply includes a low voltage secondary on/off signal line that toggles the supply from an off state to an on state when asserted. In this embodiment, the output 88 is coupled to this secondary on/off signal line.

Upon the application of power, the computer 24 will load its operating system software. A variety of operating systems are currently utilized in the computer industry, including Unix(TM), Linux(TM), DOS(TM), and Windows(TM). At this time, a large majority of the currently commercially available personal computers automatically load Windows(TM) upon power up. Furthermore, Windows(TM) includes a Startup utility, which allows the user to list one or more application programs that Windows(TM) will load and run automatically when the computer 24 is powered up.

In the embodiment of Figure 3, the remote on program 76 is listed in the Startup utility for automatic launch when the computer is powered up. The remote on program 76 causes the computer to perform an I/O operation to retrieve the instruction code stored in the instruction code register 86. Using a table which is part of the remote on program 76 that cross references instruction codes with application programs 74a, 74b, 74c, the remote on program 76 determines which application program the user wishes to have launched, and initiates the loading of this user selected application program.

With the controller 20 illustrated in Figure 1, depending on the button 30, 32, 34 pushed on the remote controller 20, different instruction codes will be sent and stored in the instruction code register 86, resulting in the launch of different application programs.

5 If the user only wants to power the computer up without launching a program, this may be accomplished by sending, for example, all zeros as an instruction code when the appropriate button 30 is pushed on the controller 20. This may be interpreted by the remote on program 76 as an instruction to load no additional application program. In addition, the remote control interface circuitry could be provided with a connection 90 to the power supply output. In an embodiment with this connection 90, if the power supply is activated locally with the power switch, the power supply output may be sensed, and the remote control interface circuit could be configured load zeros into the instruction code register in response so that no application program is automatically loaded as may be the case with the remote power up procedure. A convenient remote controller is therefore provided which is easy to carry, simple to operate, and which saves computer users time.

10 The foregoing description details certain embodiments of the invention. It will be appreciated, however, that no matter how detailed the foregoing appears in text, the invention can be practiced in many ways. As is also stated above, it should be noted that the use of particular terminology when describing certain features or aspects of the invention should not be taken to imply that the terminology is being re-defined herein to be restricted to including any specific characteristics of the features or aspects of the invention with which that terminology is associated. The scope of the invention should therefore be construed in accordance with the appended claims and any equivalents thereof.

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WHAT IS CLAIMED IS:

1. A remote controlled computer system, comprising:  
a computer comprising a wireless receiver;  
a hand-held controller comprising a wireless transmitter;  
5 wherein said hand-held controller is configured to send a signal to said wireless receiver upon user actuation, and wherein said computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving said signal.
- 10 2. The computer system of Claim 1, wherein the wireless receiver and the wireless transmitter are configured for radio frequency communication.
3. The computer system of Claim 2, wherein said wireless receiver and wireless transmitter have a communication range of approximately 200 to 500 feet.
- 15 4. The computer system of Claim 1, wherein said hand-held controller comprises at least two buttons, and wherein said hand-held controller is configured to send a first signal to said wireless receiver in response to user actuation of a first button and a second signal in response to user actuation of a second button, and wherein said computer is configured to launch a first application program in response to said first signal and a second application program in response to said second signal.
- 20 5. A method of remotely controlling a computer comprising transmitting a signal from a hand-held controller to said computer, and in response thereto, placing said computer in an on state and launching a user specified application program.
6. The method of Claim 5 comprising the step of analyzing said signal to select an application for launch from a plurality of application programs.
- 25 7. The method of Claim 5, wherein said transmitting occurs over a distance of approximately 200 to 500 feet.
8. A computer system, comprising:  
a hand-held controller comprising a radio frequency transmitter, wherein said controller is configured to transmit at least first and second different signals in response to at least first and second different user actuation operations;  
30 a computer comprising a radio frequency receiver; wherein said computer is configured to (1) receive said first and second different signals, (2)

analyze said first and second different signals, (3) perform a power up sequence in response to either said first signal or said second signal, (4) launch a first application program in response to said first signal, and (5) launch a second application program in response to said second signal.

5           9.     The computer system of Claim 8, wherein said first and second different user actuation operations comprise depressing first and second buttons on said hand-held controller.

10           10.    A method of computer control comprising:  
              sending a first signal approximately 200-500 feet from a controller to a computer;  
              in response thereto, placing said computer in an on state and launching a first application program;  
              using said application program;  
              powering down said computer;  
15           11.    A method of computer control comprising:  
              sending a second different signal approximately 200-500 feet from said controller to said computer; and  
              in response thereto, placing said computer in an on state and launching a second application program.

20           11.    A remote control device for a personal computer comprising a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer, wherein said housing comprises an attachment device for connecting said remote control device to a key ring, purse handle, or other commonly carried personal item.

25           12.    The remote control device of Claim 11, additionally comprising a plurality of user actuated buttons for selecting from a plurality of remotely controlled personal computer functions.

            13.    The remote control device of Claim 11, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

30           14.    A remote control device for a personal computer comprising:

a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer; and

at least one user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a selected application program.

15. The remote control device of Claim 14, additionally comprising a second user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a different selected application program.

16. The remote control device of Claim 14, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

17. A computer system comprising:

a computer comprising a power supply and a storage device storing application programs; and

hand-held remote control means for activating said power supply and launching a selected one of said application programs from a distance of approximately 200 to 500 feet.

18. A computer system comprising:

means for sending first and second different signals from a controller to a computer;

means for placing said computer in an on state and launching a first application program in response to said first signal; and

means for placing said computer in an on state and launching a second application program in response to said second signal.

19. A computer system comprising:

a computer;

a power source connectable to the computer so as to power operation of the computer;

at least one application program configured to operate in the computer;  
and

a hand-held remote transmitter configured to send at least one signal causing both power to be applied from the power source to the computer so as to power up the computer and also causing the at least one application program to be launched on the computer.

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## REMOTE COMPUTER CONTROLLER AND CONTROL METHOD

### Abstract of the Disclosure

A computer system is configured to be powered up by a hand-held controller. The hand-held controller is in wireless communication with a computer. One or more  
5 buttons on the hand-held controller may be used to automatically launch a particular application program which has been pre-selected by a computer user after completing the power up process.

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**REMOTE COMPUTER CONTROLLER AND CONTROL METHOD**BackgroundField of the Invention

5           The invention relates to remote control of computers.

Description of the Related Art

10           In today's business world, personal computers are almost a necessity, and are commonly found in offices and employee workspaces. Generally, people turn their computer off when they leave the office after work in the evening. This is done to conserve energy, to address safety concerns common to all energized electrical appliances, and also in response to security concerns that someone other than the computer owner may gain access to sensitive business information. Thus, when most people arrive at the office in the morning, they must turn on their computer, wait for the system to boot up, and then launch some particular application program they will be using. This results in wasted time as the user sits and waits for the computer to complete the boot up process.

15           Currently, no computer system is available that addresses this problem. Various types of remote control systems for computers have been described and marketed, but none are particularly suitable for resolving the above described problem. Many conventional remote computer controllers, wireless mice and keyboards, for example, have a very short communication range, and/or require a clear line of sight between the wireless transmitter in the device and the receiver in the computer. This makes them impractical for use by a worker until entering the office. There would therefore be minimal, if any, time savings involved with the use of these devices to control initiation of computer operation.

20           Other remote control devices work over telephone connections. One example of such a system is provided by U.S. Patent No. 5,596,628 to Jon Klein. These systems, however, require the initiation of a telephone connection with the computer to be controlled. This is not convenient for solving the above described problem. For these reasons, a convenient and simple to operate computer system with remote computer power control is needed in the art.

### Summary

The invention includes remotely controllable computer systems, methods of remote computer control, and devices for the remote control of computers. In one embodiment, the invention comprises a remote controlled computer system, including a computer comprising a wireless receiver and a hand-held controller comprising a wireless transmitter. The hand-held controller is configured to send a signal to the wireless receiver upon user actuation, and the computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving the signal.

In another embodiment the invention comprises a method of remotely controlling a computer comprising transmitting a signal from a hand-held controller to the computer, and in response thereto, placing the computer in an on state and launching a user specified application program.

One embodiment of a remote control device for a personal computer comprises a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer. The housing comprises an attachment device for connecting the remote control device to a key ring, purse handle, or other commonly carried personal item. In another embodiment, a remote control device for a personal computer comprises a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in the personal computer and at least one user actuated control operative to initiate wireless signal transmission of a command to perform a power up sequence and launch a selected application program.

### Brief Description of the Drawings

FIG. 1 is an overall perspective view of a hand-held computer controller in wireless communication with a personal computer according to one embodiment of the invention.

FIG. 2 is flow chart illustrating steps performed by a computer in response to received control signals according to one embodiment of the invention.

FIG. 3 is a block diagram of a computer system configured to receive and interpret control signals according to one embodiment of the invention.

### Detailed Description of the Invention

Embodiments of the invention will now be described with reference to the accompanying Figures, wherein like numerals refer to like elements throughout. The terminology used in the description presented herein is not intended to be interpreted in any limited or restrictive manner, simply because it is being utilized in conjunction with a detailed description of certain specific embodiments of the invention. Furthermore, embodiments of the invention may include several novel features, no single one of which is solely responsible for its desirable attributes or which is essential to practicing the inventions herein described.

Referring now to Figure 1, a computer system in accordance with one embodiment of the invention comprises a controller 20. The controller 20 is advantageously small enough to fit comfortably in a person's hand as well as in a pocket, purse, automobile glove compartment, or the like. In one embodiment, the controller 20 comprises an attachment device 22. The attachment device 22 may be a suitably sized hole, a wire loop or ring, or other facility for attaching the controller 20 to a key ring, purse handle, or other commonly carried personal item.

The controller 20 also incorporates internal wireless transmission circuitry and an antenna (not shown) for wireless communication with a computer 24 that incorporates an antenna 26 and a wireless receiver. These aspects of the computer 24 will be described in more detail below with reference to Figure 3. Using a wireless link 28, the controller 20 sends commands to the computer 24. In one embodiment, the commands issued by the controller 20 are operative to place the computer in the on state and optionally to also launch a user specified application program such as a word processor, spreadsheet, web browser, etc.

As shown in Figure 1, one embodiment of the controller 20 has three user actuated push buttons. A first button 30 may initiate only computer 24 power up, but not launch any specific application programs. A second button 32 may initiate both power up and the launch of a first user defined application program. A third button 34 may initiate both power up and the launch of a second user defined application program. Thus, the user may have a choice of several different remote control operations. This embodiment may be used to eliminate time wasted by computer users while waiting for their computer to



boot up and load a desired application program. In a business or office environment, for example, a computer user may prefer to have their office computer on and running the moment they arrive at the office. In this embodiment, an advantageous range for the communication link 28 is between approximately 200 and 500 feet. With this range, as the user is heading toward the office, they can press a button 30, 32, 34 on the controller 20, thereby initiating either only power up, or also power up plus the launch of a desired application. When they arrive at the office door a few minutes later, the computer is ready and waiting for them.

The construction of wireless transmitter and receiver circuitry suitable for implementing the wireless link 28 is well known and will not be described in detail herein. This technology is used in applications such as garage door openers, keyless entry systems for automobiles, as well as other currently available commercial applications, and a wide variety of specific designs could be used in the controller 20 and computer 24 without altering the character of the system. The 200 to 500 foot range is advantageous in that it is far enough to generally provide two or more minutes between initiation of power up and arrival of the user at the computer 24, but it is not so far to become an excessive drain on one or more batteries internal to the controller 20.

One embodiment of a method of response of the computer 24 to the actuation of the buttons 30, 32, 34 on the controller 20 is illustrated in Figure 2. The method begins at step 40 when the computer 24 receives a wireless transmission signal from the controller 20. As also shown below in Figure 3, the wireless message reception and analysis circuitry in the computer 24 is continually in the on-state, even when the remainder of the computer 24 is in an off-state. The signal received by the computer 24 advantageously includes at least two pieces of information for use by the computer 24. The first is a controller hardware identification code. The second is an instruction code that designates which application program, if any, should be launched.

At the next step 42, the computer 24 checks the controller hardware identification code, and compares it to an internally stored identification code. If, at step 44, these two codes match, the computer 24 accepts the remainder of the transmitted data and, at step 46, stores the transmitted instruction code. If the codes do not match, at step 48 the computer 24 ignores the remainder of the message. In analogy with garage door openers

and automotive keyless entry systems, this step 42 allows simultaneous use of different controllers 20 in proximity to one another in a single office building for example. In this way, the computer 24 only responds to control instructions from the controller 20 in the possession of the operator of the computer 24.

5           After storing the instruction code, at step 50 the computer initiates a power up sequence. As described below with reference to Figure 3, this step advantageously includes activating the computer power supply and loading the operating system software. At step 52, the computer 24 retrieves and interprets the stored instruction code, and at step 54, the computer launches the appropriate application program as specified by the  
10           retrieved instruction code.

Referring now to Figure 3, the computer 24 advantageously includes a processor and memory circuitry 60 and a storage device 62 that may, for example, comprise a hard disk drive. The computer 24 also includes remote control interface circuitry 64 for receiving signals and/or data from the remote transmitter 20. The computer 24 further  
15           includes a power supply 66 that supplies power to all of the electrical components of the computer 24. The processor and memory circuits 60, the storage device 62, and the remote control interface circuitry 64 are coupled through a bus system 70. Although not illustrated for purposes of clarity, those of skill in the art will appreciate that the bus system 70 will typically comprise a set of busses of varying format that communicate  
20           through bridge circuitry. The remote control interface circuitry 64 may be incorporated into the computer 24 in a variety of ways. It may comprise a daughter printed circuit board which plugs into an expansion slot in the computer 24. Alternatively, it may be incorporated directly onto a motherboard in the computer 24 that also mounts the processor and memory circuits 60. The remote control interface circuitry 64 is continually  
25           powered by a battery 72 so that it can receive and process wireless signals transmitted to the computer 24 even when the computer 24 is in an off state.

The storage device 62 stores, among other things, several application programs 74a, 74b, 74c. As discussed above, it is one of these programs that the user may wish to remotely launch. The storage device 62 also contains a remote on program 76. In this  
30           embodiment, the remote controller 20 sends a signal to the remote control interface circuitry 64 which includes the controller identification code 78 and one of the instruction

codes 80 or 82. The remote control interface circuitry 64 then compares the received identification code with a stored identification code 84. If the two match, the remote control interface circuitry 64 stores the received instruction code in an instruction code register 86.

5           After storing the instruction code in the register 86, the remote control interface circuitry activates the power supply 66 by asserting an output 88 which is connected to the power supply circuitry 66. This may be accomplished in a wide variety of ways which are well understood by those in the art. Asserting the output line 88 may close a relay in the AC power lines to the power supply, for example. In an advantageous embodiment, the  
10           power supply includes a low voltage secondary on/off signal line that toggles the supply from an off state to an on state when asserted. In this embodiment, the output 88 is coupled to this secondary on/off signal line.

          Upon the application of power, the computer 24 will load its operating system software. A variety of operating systems are currently utilized in the computer industry,  
15           including Unix(TM), Linux(TM), DOS(TM), and Windows(TM). At this time, a large majority of the currently commercially available personal computers automatically load Windows(TM) upon power up. Furthermore, Windows(TM) includes a Startup utility, which allows the user to list one or more application programs that Windows(TM) will load and run automatically when the computer 24 is powered up.

20           In the embodiment of Figure 3, the remote on program 76 is listed in the Startup utility for automatic launch when the computer is powered up. The remote on program 76 causes the computer to perform an I/O operation to retrieve the instruction code stored in the instruction code register 86. Using a table which is part of the remote on program 76 that cross references instruction codes with application programs 74a, 74b, 74c, the remote  
25           on program 76 determines which application program the user wishes to have launched, and initiates the loading of this user selected application program.

          With the controller 20 illustrated in Figure 1, depending on the button 30, 32, 34 pushed on the remote controller 20, different instruction codes will be sent and stored in the instruction code register 86, resulting in the launch of different application programs.  
30           If the user only wants to power the computer up without launching a program, this may be accomplished by sending, for example, all 0s as an instruction code when the appropriate

button 30 is pushed on the controller 20. This may be interpreted by the remote on program 76 as an instruction to load no additional application program. In addition, the remote control interface circuitry could be provided with a connection 90 to the power supply output. In an embodiment with this connection 90, if the power supply is activated locally with the power switch, the power supply output may be sensed, and the remote control interface circuit could be configured load 0s into the instruction code register in response so that no application program is automatically loaded as may be the case with the remote power up procedure. A convenient remote controller is therefore provided which is easy to carry, simple to operate, and which saves computer users time.

The foregoing description details certain embodiments of the invention. It will be appreciated, however, that no matter how detailed the foregoing appears in text, the invention can be practiced in many ways. As is also stated above, it should be noted that the use of particular terminology when describing certain features or aspects of the invention should not be taken to imply that the terminology is being re-defined herein to be restricted to including any specific characteristics of the features or aspects of the invention with which that terminology is associated. The scope of the invention should therefore be construed in accordance with the appended claims and any equivalents thereof.

WHAT IS CLAIMED IS:

1. A remote controlled computer system, comprising:  
a computer comprising a wireless receiver;  
a hand-held controller comprising a wireless transmitter;  
5 wherein said hand-held controller is configured to send a signal to said wireless receiver upon user actuation, and wherein said computer is configured to perform a power on sequence and to launch a user-defined application program in response to receiving said signal.
2. The computer system of Claim 1, wherein the wireless receiver and the  
10 wireless transmitter are configured for radio frequency communication.
3. The computer system of Claim 2, wherein said wireless receiver and wireless transmitter have a communication range of approximately 200 to 500 feet.
4. The computer system of Claim 1, wherein said hand-held controller  
15 comprises at least two buttons, and wherein said hand-held controller is configured to send a first signal to said wireless receiver in response to user actuation of a first button and a second signal in response to user actuation of a second button, and wherein said computer is configured to launch a first application program in response to said first signal and a second application program in response to said second signal.
5. A method of remotely controlling a computer comprising transmitting a  
20 signal from a hand-held controller to said computer, and in response thereto, placing said computer in an on state and launching a user specified application program.
6. The method of Claim 5 comprising the step of analyzing said signal to select an application for launch from a plurality of application programs.
7. The method of Claim 5, wherein said transmitting occurs over a distance  
25 of approximately 200 to 500 feet.
8. A computer system, comprising:  
a hand-held controller comprising a radio frequency transmitter, wherein  
said controller is configured to transmit at least first and second different signals  
in response to at least first and second different user actuation operations;  
30 a computer comprising a radio frequency receiver; wherein said computer is configured to (1) receive said first and second different signals, (2)

analyze said first and second different signals, (3) perform a power up sequence in response to either said first signal or said second signal, (4) launch a first application program in response to said first signal, and (5) launch a second application program in response to said second signal.

5           9.       The computer system of Claim 8, wherein said first and second different user actuation operations comprise depressing first and second buttons on said hand-held controller.

10           10.       A method of computer control comprising:

              sending a first signal approximately 200-500 feet from a controller to a computer;

              in response thereto, placing said computer in an on state and launching a first application program;

              using said application program;

              powering down said computer;

15           15       sending a second different signal approximately 200-500 feet from said controller to said computer; and

              in response thereto, placing said computer in an on state and launching a second application program.

20           11.       A remote control device for a personal computer comprising a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer, wherein said housing comprises an attachment device for connecting said remote control device to a key ring, purse handle, or other commonly carried personal item.

25           12.       The remote control device of Claim 11, additionally comprising a plurality of user actuated buttons for selecting from a plurality of remotely controlled personal computer functions.

              13.       The remote control device of Claim 11, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

30           14.       A remote control device for a personal computer comprising:

a hand-held housing containing wireless signal transmission circuitry for communicating with wireless signal receiving circuitry in said personal computer; and

5 at least one user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a selected application program.

10 15. The remote control device of Claim 14, additionally comprising a second user actuated control operative to initiate wireless signal transmission from said remote control device of a command to said personal computer to perform a power up sequence and launch a different selected application program.

16. The remote control device of Claim 14, wherein said wireless transmission circuitry is configured to communicate with said wireless receiving circuitry over a range of approximately 200 to 500 feet.

15 17. A computer system comprising:

a computer comprising a power supply and a storage device storing application programs; and

20 hand-held remote control means for activating said power supply and launching a selected one of said application programs from a distance of approximately 200 to 500 feet.

18. A computer system comprising:

means for sending first and second different signals from a controller to a computer;

25 means for placing said computer in an on state and launching a first application program in response to said first signal; and

means for placing said computer in an on state and launching a second application program in response to said second signal.

19. A computer system comprising:

a computer;

30 a power source connectable to the computer so as to power operation of the computer;

at least one application program configured to operate in the computer;  
and

5 a hand-held remote transmitter configured to send at least one signal causing both power to be applied from the power source to the computer so as to power up the computer and also causing the at least one application program to be launched on the computer.



## REMOTE COMPUTER CONTROLLER AND CONTROL METHOD

### Abstract of the Disclosure

5 A computer system is configured to be powered up by a hand-held controller. The hand-held controller is in wireless communication with a computer. One or more buttons on the hand-held controller may be used to automatically launch a particular application program which has been pre-selected by a computer user after completing the power up process.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant	:	Leman, et al.	)	Group Art Unit 2635
			)	
Appl. No.	:	09/574,736	)	
			)	
Filed	:	May 18, 2000	)	
			)	
For	:	REMOTE COMPUTER	)	
		CONTROLLER AND	)	
		CONTROL METHOD	)	
			)	
Examiner	:	Vernal U. Brown	)	
			)	

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**DECLARATION BY PETER SUN**

1. I, Peter Sun, am an employee of the law firm Knobbe, Martens, Olson & Bear, LLP. I am a law school student working with attorney Eric M. Nelson.
2. On May 10, 2005 I participated in a conference call with Eric M. Nelson and Ed Kirchmeier, in-house patent counsel at Micron Technology, Inc. In that conference call, Ed Kirchmeier told us that the last known address of William Creese by Micron Technology was "112 Arnold Dr., Daytona Beach, FL 32114" and that they had no phone number listed for him.
3. On May 10, 2005 I called the telephone company's information line at 411 to request the phone number for William Creese in Daytona Beach, Florida. I was told by the operator that his number was not listed.
4. On May 20, 2005, I asked Sheila Deschenes, assistant to Eric M. Nelson, to send a letter via Federal Express to William Creese's address at "112 Arnold Dr., Daytona Beach, FL 32114." The letter requested that William Creese review, sign, and return a declaration under 37 C.F.R. §1.131 relating to dates involving the patent application. Appendix A is a copy of the letter.
5. On May 24, 2005 I was informed by Sheila Deschenes that the letter was not deliverable to William Creese at that address. On May 26, 2006 I conducted a search using the EZFIND Combined Person Locator Nationwide database on Lexis Nexis. Prior to conducting the search, I consulted with a Lexis Nexis telephone support researcher who suggested the optimal search terms in locating a person who's last known address was in Daytona Beach, FL. The search result showed that in

Appl. No. : 09/574,736  
Filed : May 18, 2000

addition to the address "112 Arnold Dr.," William Creese also had a later address at "104 Killdeer Ct., Daytona Beach, FL 32119." Appendix B is a copy of the search result.

6. On May 27, 2005, I asked Sheila Deschenes to re-send the letter via Federal Express to William Creese's address at "104 Killdeer Ct., Daytona Beach, FL 32119."

7. On May 31, 2005 I was informed by Sheila Deschenes that Federal Express again could not deliver this letter as the recipient had moved. The letter was returned to us on June 3, 2005.

Penalty of Perjury Statement

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent resulting therefrom.

Dated: June 6, 2005

By: Peter Sun  
Peter Sun

1731329  
052605

# **Knobbe Martens Olson & Bear LLP**

*Intellectual Property Law*

550 West C Street  
Suite 1200  
San Diego CA 92101  
Tel 619-235-8550  
Fax 619-235-0176  
www.kmob.com

*Eric M. Nelson*

May 20, 2005

## **VIA FEDERAL EXPRESS**

William M. Creese  
112 Arnold Dr.  
Daytona Beach, FL 32114

Re: U.S. Patent Application  
Title: **REMOTE COMPUTER CONTROLLER AND CONTROL METHOD**  
Application No.: 09/574,736  
Filed: May 18, 2000  
Our Reference: MTIPAT.185A

Dear Mr. Creese:

Our firm has been retained by Micron Technologies to file and obtain a patent regarding the above-identified patent application for which you are a named inventor. Enclosed is a copy of an Office Action we recently received from the U.S. Patent and Trademark Office (USPTO). The initial deadline of response to the Office Action is June 28, 2005. Your timely response to this letter is appreciated for compliance with the deadline.

In the Office Action, the USPTO Examiner has rejected the patent application on the grounds of nonobviousness under 35 U.S.C. § 103. This is due to the fact that there exists a patent with an effective date of March 13, 2000, and thus has an earlier effective filing date than your patent. However, in the U.S., patents are awarded to the first to invent, and not the first to file. Thus, in order to secure issuance of your patent, we are attempting to establish inventorship prior to the date of March 13, 2000. In support of this, we would like you to review the following enclosed documents:

1. Office Action from the USPTO dated March 28, 2005
2. Declaration Under 37 C.F.R. § 1.131
3. Declaration Appendix A (email dated February 23, 2005)
4. Declaration Appendix B (filed patent application)
5. Declaration Appendix C (draft patent application)
6. Cover letter from our firm to Micron Electronics dated January 24, 2000 (letter showing date our firm provided the draft application to Micron Electronics)

## **Appendix A**

Orange County  
949-760-0404

San Francisco  
415-954-4114

Los Angeles  
310-551-3450

Riverside  
951-781-9231

San Luis Obispo  
805-547-5580

William Creese

May 18, 2005

Page -2-

7. Response letter from our firm to the USPTO dated June 10, 2004 showing the latest version of the application's claims

If you agree that the facts noted in the Declaration Under 37 C.F.R. § 1.131 are accurate, please sign and return it our office. If possible, please fax the signed declaration to us at 619-235-0176 and return the original to us. Please do this no later than **June 10, 2005**. For your convenience, we have enclosed a self-addressed paid return envelope.

In the meantime, if you have any comments or questions, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Nelson', with a stylized flourish at the end.

Eric M. Nelson


Enclosures:

Office Action from the USPTO dated March 28, 2005.

Declaration Under 37 C.F.R § 1.131, with Appendices A-C

Letter from our firm to Micron Electronics dated January 24, 2000

Response letter from our firm to the USPTO dated June 10, 2004

Source: [Public Records > People, Business & Asset Locators > EZFIND Combined Person Locator Nationwide](#)   
Terms: ((william or bill) /3 (creese or cresse)) and "daytona beach" ([Edit Search](#))

☒ Select for FOCUS™ or Delivery



*CRESSE, WILLIAM M*

**THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY**

PERSON LOCATOR - P-SRCH

**Name:** CRESSE, WILLIAM M

**Former Name:**

**CREESE, WILLIAM**

**Social Security Number:** 518-98-XXXX

**Address:**

104 KILLDEER CT

**DAYTONA BEACH, FL 32119**

Address Created: 12/2000

**Previous Addresses:**

112 ARNOLD DR

**DAYTONA BEACH, FL 32114**

Address Created: 8/1999

36 SW 7TH ST

**MERIDIAN, ID 83642**

Address Created: 5/1997

**Birthdate:** 4/1965

Source: [Public Records > People, Business & Asset Locators > EZFIND Combined Person Locator Nationwide](#) 

Terms: ((william or bill) /3 (creese or cresse)) and "daytona beach" ([Edit Search](#))

View: Full

Date/Time: Thursday, May 26, 2005 - 6:02 PM EDT

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MTIPAT.185A

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant	:	Leman, et al.	)	Group Art Unit 2635
			)	
Appl. No.	:	09/574,736	)	
			)	
Filed	:	May 18, 2000	)	
			)	
For	:	REMOTE COMPUTER	)	
		CONTROLLER AND	)	
		CONTROL METHOD	)	
			)	
Examiner	:	Vernal U. Brown	)	
			)	

---

**DECLARATION BY SHEILA DESCHENES**

1. I, Sheila Deschenes, am an employee of the law firm Knobbe, Martens, Olson & Bear, LLP. I am an assistant to attorney Eric M. Nelson.
2. On May 20, 2005, the firm sent a letter addressed to William Creese at the address of "112 Arnold Dr., Daytona Beach, FL 32114" via Federal Express. The letter requested that William Creese review, sign, and return a declaration under 37 C.F.R. §1.131 relating to dates involving the patent application. Appendix A is a copy of the letter.
3. On May 24, 2005 Federal Express contacted the firm to notify us that they had given the letter to someone present at that address. After accepting delivery, however, the person informed Federal Express that William Creese was not at that address.
4. On May 24, 2005 I received a call from a woman who said she that lived at the address and that she had accepted delivery of the letter accidentally. She said told me that William Creese no longer lived there and that she did not have a forwarding address for him. She said that she did not know who William Creese was, other than that he was a prior resident at that address. The woman said that she would leave the letter on her doorstep for Federal Express to pickup and return to us.
5. On May 26, 2005 Federal Express picked up the letter, and they returned it to our office on May 27, 2005. Appendix B is a copy of the envelope showing the attempted but failed delivery.
6. On May 27, 2005, per the direction of Peter Sun, another employee at the firm, the firm resent the letter, this time addressing it to William Creese at the address of "104 Killdeer Ct., Daytona Beach, FL 32119."

Appl. No. : 09/574,736  
Filed : May 18, 2000

7. On May 31, 2005 I was informed by Federal Express that they failed this attempted delivery as the recipient had moved. The letter was returned to us on June 3, 2005. Appendix C is a copy of the envelope showing the second attempted but failed delivery.

Penalty of Perjury Statement

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent resulting therefrom.

Dated: June 7, 2005

By: Sheila Deschenes  
Sheila Deschenes

1731260  
052605



# **Knobbe Martens Olson & Bear LLP**

*Intellectual Property Law*

550 West C Street  
Suite 1200  
San Diego CA 92101  
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*Eric M. Nelson*

May 20, 2005

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Orange County  
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William Creese  
May 18, 2005  
Page -2-

7. Response letter from our firm to the USPTO dated June 10, 2004 showing the latest version of the application's claims

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In the meantime, if you have any comments or questions, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Nelson', with a stylized flourish at the end.

Eric M. Nelson

Enclosures:

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Declaration Under 37 C.F.R § 1.131, with Appendices A-C  
Letter from our firm to Micron Electronics dated January 24, 2000  
Response letter from our firm to the USPTO dated June 10, 2004

and agree to indemnify us to deliver this shipment without obtaining a signature  
Questions? Visit our Web site at [fordoc.com](http://fordoc.com)  
or call 1.800.666.6661. 1.800.666.6661

**FedEx Urgent**  
 Expires  
 Name  
 Company  
 Address  
 City, State, Zip  
 Telephone

Date: 06/02/2005  
 Wt: 1.0 LBS  
 0.00 TOTAL  
 Svc: Express Saver Package  
 Trk: 6201 0219 1685

ORIGIN ID: DBBR  
 DBBR STATION  
 FEDEX  
 833 BILL FRANCE BLVD  
 DAYTONA BEACH, FL 32117  
 UNITED STATES US  
 TO KNOBBE MARTENS OLSON BEAR  
 KNOBBE MARTENS OLSON BEAR  
 550 W C ST  
 SAN DIEGO, CA 92101

Actual Wgt: 1.0 LBS  
 System: 032684/CFE2246  
 Account: S \*\*\*\*\*  
 (619) 235-8650  
**FedEx**  
 Express  
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1000  
**FedEx. US Airbill**

8467 9683 5

1 From This portion can be removed for Recipient's records.  
 Date 5/27/05 FedEx Tracking Number 846796835131

Sender's Name Eric M. Nelson Phone 619 235-85

Company KNOBBE MARTENS OLSON BEAR  
 Address 550 W C ST  
 City SAN DIEGO  
 State CA 92101-35

2 Your Internal Billing Reference MTIPAT.185A

3 To

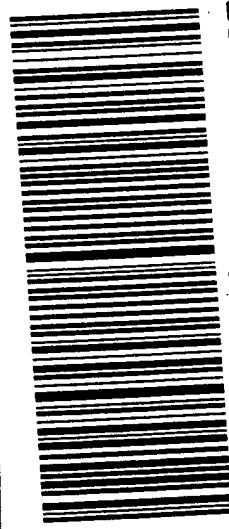
**NO POUCH NEEDED.**  
 See back for peel and stick application instructions.

OTHER:  
 Express Saver  
 Economy 2-Day  
 Priority Overnight  
 FedEx has returned this shipment at the shipper's expense via one of the toll:  
 Company policy does not allow us to keep an undeliverable shipment longer  
 Shipper requested return  
 Unable to collect C.O.D. charges  
 Shipment held for pickup the maximum 5 days.  
 A Post Office box number was the only address given or obtainable.  
 Recipient's address on your shipment was incorrect and/or incomplete and  
 without a signature.  
 Recipient was not in when we attempted delivery and we were not authorized.  
 Recipient moved and left no forwarding address or phone number.  
 Refused by recipient.  
 THIS SHIPMENT IS BEING RETURNED FOR THE FOLLOWING REASON(S):

**Customer**  
 A T T E N T I O N

Align bottom of Peel and Stick Airbill here.

EXPRESS SAVER PACKAGE  
 TRK# 6201 0219 1685 Form 0201  
 TUE  
 Deliver By: 07JUN05  
 SAN A1  
**SB SDMA**  
 92101 -CA-US



Part # 156148-434 NRIT 3-04

☒ Sender  
☐ Recipient  
☐ Third Party  
☐ Credit Card  
☐ Cash/Check  
☐ Other Recip  
☐ Acct No.  
☐ Cash/Check

Total Packages  
 Total Weight  
 Total Charges  
 Credit Card Auth.

8. Sign to Authorize Delivery Without a Signature

Your liability is limited to \$100 unless you declare a higher value. See the FedEx Service Guide for details.

By signing your signature, you agree to this statement without obtaining a signature  
 and agree to the terms and conditions of the FedEx Service Guide.  
 or call 1.800.368.5858 or visit us online at fedex.com  
 SF-100 (Rev. 1/01) Net 1/02/05-07/04-0003 NED-REVISED IN U.S.A.

466

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Appendix C

Customer: This service area is provided for your internal use  
and convenience. Service must be marked on airbill.

FedEx Service:

Peel  
here

**\*REMOVE LABEL BEFORE DELIVERY\***  
117465 M-0025 01/01 WCS

**FedEx**  
Express  
**EXCEPTION / SEND AGAIN**  
Customer's Package/shipment was delayed due to:

**FOR IN STATION USE ONLY**

☐ Package Researched Date: \_\_\_\_\_ Initial: \_\_\_\_\_  
Comments: Moved

- ☒ Address is correct/Recipient no longer at this address
- ☐ Incorrect recipient address/Incomplete recipient address
- ☐ Need apartment or suite number
- ☐ Recipient moved and left no forwarding address or phone number
- ☐ Not in / Business closed / Not authorized to leave shipment without a signature
  - ☐ 1st Attempt
  - ☐ 2nd Attempt
  - ☐ 3rd Attempt
- ☐ Signature required, please contact shipper for disposition
- ☐ Holiday - Closed
- ☐ Package not attempted (reason): \_\_\_\_\_
- ☐ Refused (reason): \_\_\_\_\_
- ☐ Future delivery. Reattempt on (date): \_\_\_\_\_
- ☐ Recipient requested hold for pickup
- ☐ Collect on Delivery. Payment not available. Reattempt to be made on (date): \_\_\_\_\_
- ☐ Bill recipient shipment. Payment not available. Reattempt to be made on (date): \_\_\_\_\_
- ☐ Other \_\_\_\_\_

Date: 5/31 Employee #: 152848  
**POD MUST BE OBTAINED WHEN DELIVERY IS COMPLETED.**

**8 Ounces**  
**Limitation**

**If the gross weight and airbill exceed apply. Eight ounces**

**Do not send**

**For more information:**  
In the U.S. call 1.800.Go.FedEx  
domestic shipments; 1.800.  
shipments. Customers out-  
side the U.S., call your local  
FedEx office.

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REV 11/02 RT

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POD INTO COSMOS\*\***  
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greater of \$100 or \$9.07 per pound, should not  
be shipped in this envelope. The liability of FedEx for damage,  
delay, or loss of international shipments by surface or air may  
be limited by certain treaties, including the Warsaw Convention.  
Please refer to the FedEx Service Guide or the FedEx International  
Air Waybill for more details.



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